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**Research
Development
and Technology
Division**

Missouri
Department
of Transportation

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The Missouri Department of Transportation Research, Development and Technology Program Technical Advisory Groups

History

New technologies, ideas, and values in transportation are rapidly altering the traditional roles of state departments of transportation (DOTs). To understand these changes and incorporate them in their organizations, state DOTs have accelerated research, development and technology sharing programs. In the fall of 1994, MoDOT formed a Research Administrative Team to review federal research guidance and review MoDOT's research and development process. Out of this review, the Research, Development and Technology unit (RDT) was established at MoDOT in 1996.

The RDT unit's research program originally was assisted by the Technical Review Committee (TRC), made up of 32 representatives of MoDOT business and work units and the Federal Highway Administration. The TRC was to operate as a clearinghouse for research investigations based on their value to the department's strategic and business plan. Just as important, it was also meant to disseminate to and collect information from the various MoDOT work units.

When the TRC was formed, its originators thought the committee members' diverse organizational backgrounds would help provide an organization-wide research agenda for the department. While the TRC performed as designed, its operation proved inefficient for the members. Functional areas in the department not related to a research idea were included on all projects. This resulted in an all-or-nothing position for members: the research idea was theirs or related to their work unit, or it wasn't and their expertise was underutilized.

Technical Advisory Groups

Based on a 1998 multi-state RDT peer exchange, along with internal administrative reviews, MoDOT implemented the concept of smaller, more focused Technical Advisory Groups (TAGs) for the various specialized areas within the research program. In 2000, the TAGs replaced the TRC in reviewing and recommending research projects. The TRC remains active in its role of collecting and disseminating information throughout the department.

The TAGs include TRC members in seven specialized research areas reflecting the department's Research Focus Plan. TAGs have been established in the following emphasis areas: project development and bridges; traffic and safety; operations; pavements; geotechnical; new products; and social, economic and environmental. Each TAG has approximately 11 members. As research ideas and proposals are submitted to the RDT unit, the TAG group most closely related to the research emphasis reviews them.

The TAGs function similarly to the previous TRC structure. The various TAGs review internally and externally generated research ideas and proposals that are then selected for

further action, returned for more information or rejected. Decisions are based on group discussion and consensus, along with prioritization and oversight via a Research Idea Decision Matrix. The TAGs then provide their recommendations to the RDT administration for final review. The TAG members also collect research ideas from their respective work units, champion and promote research ideas and results and disseminate information back to their work units through the TRC structure.

The greatest advantages of the TAG structure compared to the larger TRC structure are the size and specific focus of each group. More specific TAG membership based on interests and expertise ensures that TAG members have relevant knowledge concerning the research area and that their time spent in TAG activities uses their unique contribution to the department. Additionally, smaller group sizes are more conducive to resolution and action on projects and inspire a sense of ownership for the research projects originated in the TAGs.

Each TAG meets quarterly or as needed throughout the year to review and act on research projects. The focus and research area of each TAG corresponds with the functional areas that the group represents. These seven TAGs have been successful at MoDOT. The groups are comprehensive enough to address the wide range of possible research topics while remaining specific enough to fully utilize the diverse talents of the TAG members.

The TRC role remains as the source of primary contact with district and functional unit management teams and in a principal advisory role to the RDT Administrative Team. While the more focused TAG structure is relatively new at MoDOT, early indications suggest that the TAG structure is an appropriate and successful means to efficiently develop and maintain the research, development and technology transfer program at MoDOT. The department will continue to conduct multi-state peer exchanges and internal reviews to assess the TAG and TRC structure and to ensure the RDT program is advancing the methods used by MoDOT to provide a quality transportation system in Missouri.

For more information concerning MoDOT's research program, TAGs and TRC, please contact:

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